

### ABSTRACT

The present invention relates to a system and methodology to facilitate I/O access to a computer storage medium in a predictable and efficient manner. A scheduling system is provided that mitigates the problem of providing differing levels of performance guarantees for disk I/O in view of varying levels of data access requirements. In one aspect, the scheduling system includes an algorithm or component that provides high performance I/O updates while maintaining high throughput to the disk in a bounded or determined manner. This is achieved by dynamically balancing considerations of I/O access time and latency with considerations of data scheduling requirements. Also, the system provides latency boundaries for multimedia applications as well as managing accesses for other applications.